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EXAMINER

CARIASO, ALAN B

ART UNIT PAPER NUMBER

2875

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,010

Applicant(s)

KRAFT, EDWARD ROBERT

Examiner

Alan Cariaso

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the transporting pipe injecting light flux into at least one edge of the light emitting panel from the edge that is perpendicular the small end of the embedded light guides (claim 4), task lighting using a fluorescent light bulb ... fashioned to fit into existing or new "T" grid drop ceilings (claim 5), the luminaire that can be surface mounted or hung (claim 6), heat generated from the light source could be discarded or recycled to provide heat for other uses (claim 7) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Some examples of claim subject matter not provided in the specification are: method step of rendering a surface of the light guide to be diffusively light emissive by abrading, by coating, by chemically treating the surface; the tapered light pipe injector being bent over a radius of 10 times its $\frac{1}{2}$ thickness or greater; task lighting application where the luminaire is fashioned to fit into an existing or new T grid drop ceilings; the emitting surface could be etched, painted, silk screened or laminated with normal signage materials; heat discard from the light source.

5. Claim 1 is objected to because of the following informalities: Claim 1, line 4, the term "form" appears to be incorrect as used in the phrase "a tapered light guide that couples the light flux ... to a light emitting luminaire". It should be replaced with --from--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-8 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

8. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 1, lines 5 & 6, the limitations "a light emitting luminaire" and "a lighting luminaire" are indefinite as being the same limitation or two different parts.

10. Claims 2 and 3 are indefinite as to what encompasses the method steps at least in claim 2. Note a method claim indicates in the preamble that it is method for ...

11. Claim 3, sections b to e are indefinite as being dependent claims and for not limiting methods of rendering the surface diffusively light emissive in the alternative.

12. Claim 4, at least the limitations "the light emitting panel" and "the small end of the embedded light guides" have no antecedent basis.

13. Claim 4, line 10, the term "etendue" is indefinite.

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14. Regarding claim 5, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

15. Claims 6 and 8 provides for the use of being mounted or hung and using alternate base materials with the same inherent optical properties, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 6 and 8 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

16. Claim 7, "the light source" and "the light emitting panel" have no antecedent basis.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

18. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by TAI et al (US 5,671,994).

19. TAI discloses a remote light source (71-fig.8), an optical light pipe (70), a tapered light guide (28') coupling light flux from the light pipe (F) to a light emitting luminaire (14).

20. Claims 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by HED (US 5,836,669).

21. HED discloses surface mounted and hung luminaries (figs.2A, 2B, 6, 7, 12) defining general or task lighting, having base or solid plastic or glass materials, the emitting surface is painted or silk screened (col.9, lines 52).

22. As for the phrase "can be used in explosive environments", "could operate in extreme hypo and hyper baric conditions without exploding", "can be fashioned to fit into existing T grid drop ceilings", "could be sealed into a clean room air plenums", "ideally suited for an large exterior back lit signage", etc., a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the

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claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

23. Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by KRENT et al (US 4,843,524).

24. KRENT discloses surface mounted luminaires (figs.1-4, 9, 11A) of which heat generated is discarded to lower air conditioning requirements (by cooling device 16) and including a light emitting panel (28,38,40).

25. As for use in explosive or caustic atmospheres or unaffected by pressure changes or using alternate base materials, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over TAI et al (US 5,671,994) in view of PRISTASH et al (US 5,136,480).

28. TAI discloses the claimed invention including the tapered light guide (62,28-figs.2 or 2A) directing light flux perpendicular (by bending of the tapered light injector fig.2A) to the small end (60) of a light guide (14) which is embedded (at least by plate 30-fig.1A), the embedded light guide (14) has a surface (36) that is at least treated to affect light refraction (fig.5) between the base panel (30) and the embedded light guide (14), that the light guide (as whole-figs.13-14 or at least at the tapered portion 28,62-fig.1A) has a progressively larger cross sectional area and increasing surface area more distal to the light injection edge.

29. However, TAI does not disclose the extraction zone as tapered irregular tetrahedron shape extending continuously from a cross sectional small end to the large end of the light guide in the direction of light propagation (claim 2), additional smaller surface within the irregular tetrahedron shape (claim 3) and bending of the tapered light pipe injector over a radius of 10 times its $\frac{1}{2}$ thickness or greater (claim 4).

30. PRISTASH teaches the equivalence of various extraction zone light guides (figs.4-7) embedded or covered by either a reflective base (34-fig.4) or refractive base (60-fig.7), in particular the light guide (49- fig. 6) having at least light entering edge (44 or 45 -fig.5) and a extraction surface (46,col.4, line 59 col.5, line 7) which comprises a plurality of prismatic grooves which substantially define an irregular tetrahedron extending continuously from the light entrance end to the opposite end of the light

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guide, including additional smaller surfaces (42-fig.5) within each irregular tetrahedron for the purpose of extracting light to emanate from a major surface of the light guide (49). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the light guide assembly of TAI et al to include the equivalent extraction zones of various light guides one of which include a plurality of irregular tetrahedrons extending in the direction of light propagation as taught by PRISTASH et al in order to extract light and emanate from a major surface of the light guide.

31. As for the bending of the tapered light pipe injector over a radius of 10 times its $\frac{1}{2}$ thickness or greater, it would have been obvious to one having ordinary skill in the art at the time the invention was made to bend the tapered light pipe injector at the claimed optimal values or range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. One would have been motivated to bend the tapered light pipe as claimed to minimize light loss or maximize light propagation toward the extraction zone of the light guide. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. BLACKINGTON (US 4,528,617) discloses a remote light source, an optical light pipe (F), a tapered light guide (14 or 41) coupling light flux from the light

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pipe (F) to a light emitting luminaire (13 or 43). DAVENPORT et al (US 5,101,325) show light pipes (24) optically coupled to tapered light guides (28,30,fig.5) and optically integral to an extraction zone (32,33) of the light guide (fig.6), and further having an embedded light guide (fig.7). OHKAWA (US 5,997,148) and GWO-JUH et al (US 6,164,791) show tetrahedron shaped grooves (101,102-figs 1,4,7; 21,22-figs.3-5, respectively) for directing light or extracting light from the light guide. AIZENBERG et al (US 4,105,293) show tapered light guides with extraction zones attached to a sub-ceiling structure.

33. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.


Applicant is advised of the availability of the publication "Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office." This publication is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Cariaso whose telephone number is (703) 308-1952. The examiner can normally be reached on M-F (9:00-5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Alan Cariaso
Primary Examiner
Art Unit 2875

AC
February 24, 2003